



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/670,552

09/25/2003

William J. Colucci

NM 7520

5492

66882

7590

04/21/2008

NEWMARKET SERVICES CORPORATION

c/o Thomas & Raring, P.C.

536 GRANITE AVENUE

RICHMOND, VA 23226

EXAMINER

TOOMER, CEPHIA D

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

04/21/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/670,552	<b>Applicant(s)</b> COLUCCI ET AL.	
	<b>Examiner</b> Cephia D. Toomer	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 14 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3,4,7,10-14,17 and 23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,4,7,10-14,17 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This Office action is in response to the terminal disclaimer filed August 14, 2007. The terminal disclaimer has been disapproved by the paralegal because Applicant applied an incorrect fee code.

Upon further consideration of the claims, prior art and declaration submitted by Mr. Colucci, the 103 rejection over MacDuff and MacDuff in view of Udelhofen are reinstated.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3, 7, 10-14 and 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDuff (US 6,458,172).

MacDuff teaches a fuel additive composition comprising a Mannich detergent, a fluidizer and optionally a succinimide detergent. MacDuff teaches that this additive composition reduces intake valve deposits in internal combustion engines (see abstract).

The Mannich detergent is prepared from the reaction of a hydrocarbyl phenol, an aldehyde and an amine (see col. 1, lines 49-55). The fluidizer may be a polyetheramine as set forth in the present claims (see col. 1, lines 56-57) or a polyether

Art Unit: 1797

(polyoxyalkylene) that has a molecular weight within Applicant's claimed range (see col. 3, lines 15-19) or a the fluidizer may be a mixture of the polyetheramine and polyether. The succinimide detergent is prepared by reacting a polyamine and a hydrocarbonyl-substituted succinic acylating agent (see col. 3, lines 20-24). The polyether and polyetheramine encompasses the claimed molecular weights when n and q are at least 15 and the R substituents are lower alkyl. The fuel composition contains methylcyclopentadienyl manganese tricarbonyl (MMT) and other conventional additives (see col. 6, lines 46-69). The fuel is gasoline, diesel , gasoline and alcohol or diesel and ether (see col. 5, lines 44-65).

MacDuff teaches the limitations of the claims other than the ratio of Mannich base to succinimide. However, no unobviousness is seen in this difference because it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the proportions of the components through routine experimentation for the best results. As to optimization of results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over MacDuff in view of Udelhofen (US 4,231,759).

MacDuff fails to teach that the alkyl-substituted hydroxyaromatic compound used in preparing the Mannich base is alkylated cresol. However, Udelhofen teaches that the alkyl-substituted hydrocarbyl compounds of MacDuff may be replaced with alkylated cresol (see abstract; col. 4, lines 59-65).

It would have been obvious to one of ordinary skill in the art to replace the hydroxyaromatic compound of MacDuff with alkylated cresol because Udelhofen teaches that in addition to the hydroxyaromatic compounds others which may be used include alkyl-substituted cresol.

### ***Response to Arguments***

1. The declaration submitted by William J. Colucci has been reconsidered and is not deemed to constitute unexpected results. The showings are not commensurate in scope with the claims. The Mannich base detergent is limited to cresol Mannich base prepared by reacting a long chain polyisobutylene-substituted cresol, N,N-dimethyl-1,3-propanediamine and formaldehyde, wherein the polyisobutylene has a number average molecular weight of about 900. The claims are silent with respect to the alkyl substituted group of the cresol (claim 4) and claim 23 is open to any type of Mannich base. The succinimide of the data is limited to those formed from dimethylaminopropylamine and TETA polyamine, wherein the succinimide:polyamine ratio is 1:1 and 1:0.5, respectively. The claims do not recite such limitations. Therefore, it cannot be ascertained from the data if in fact the results are unexpected.

While the examiner notes that Applicant's position is that all conventional fuel detergents will not work in DIG, Applicant has not shown that he hasn't arbitrarily tested

Art Unit: 1797

a variety of known Mannich base and succinimide detergents for internal combustion engines and went through routine experimentation to discover which of these combination of detergents also work in DIG. Also, Applicant has not shown that there was any particular reason based upon chemical analysis why one combination of Mannich base and succinimide detergent that Applicant did not expect to work actually did work in a DIG, or was it just a matter of picking and choosing and discarding those that didn't work and claiming those that did? In the examiner's view, the data in the Table provide evidence that one of ordinary skill in the art would have been led to, not discouraged from, testing these conventional internal combustion fuel additives through routine experimentation and determine their suitability for a DIG.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cephia D. Toomer/  
Primary Examiner  
Art Unit 1797

10670552\20080416